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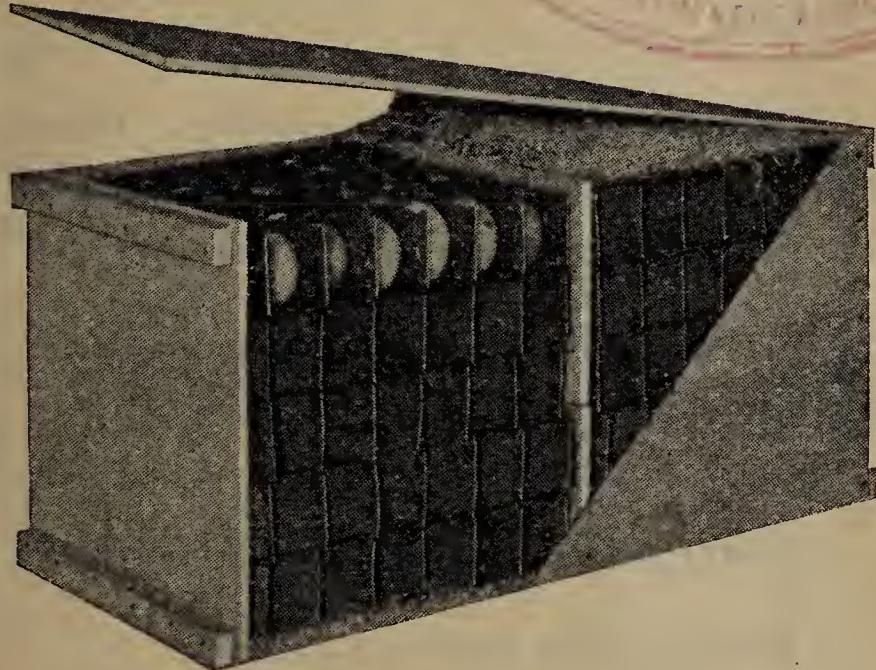
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## POINTS FOR EGG SHIPPERS

No. 1

# How to Load Cars of Eggs



U. S. DEPARTMENT OF AGRICULTURE  
BUREAU OF CHEMISTRY  
WASHINGTON, D. C.

**P**REVENT damage in transit to eggs by proper packing, stowing, bracing and buffing. Cases must be standard and new, with at least five cement-coated three-penny nails at each corner of sides, bottom and at center partition. Use medium or heavier new flats and fillers. Spread top and bottom cushions evenly and make them fit.

Make the load fit the car exactly. There should not be an inch of play lengthwise of the car when it arrives at destination.

You can do it if you follow the directions in this folder.

**LOAD FROM THE SIDE.**

**MAKE THE LOAD SOLID.**

**PUT BRACES UNDER THE CASES.**

**MAKE THE BUFFING FIT THE  
SPACE TIGHTLY.**

**HAVE THE LOAD EVEN AT THE  
DOORWAY.**

BEGINNING A STRAIGHT-JOINT LOAD BUFFED WITH STRAW

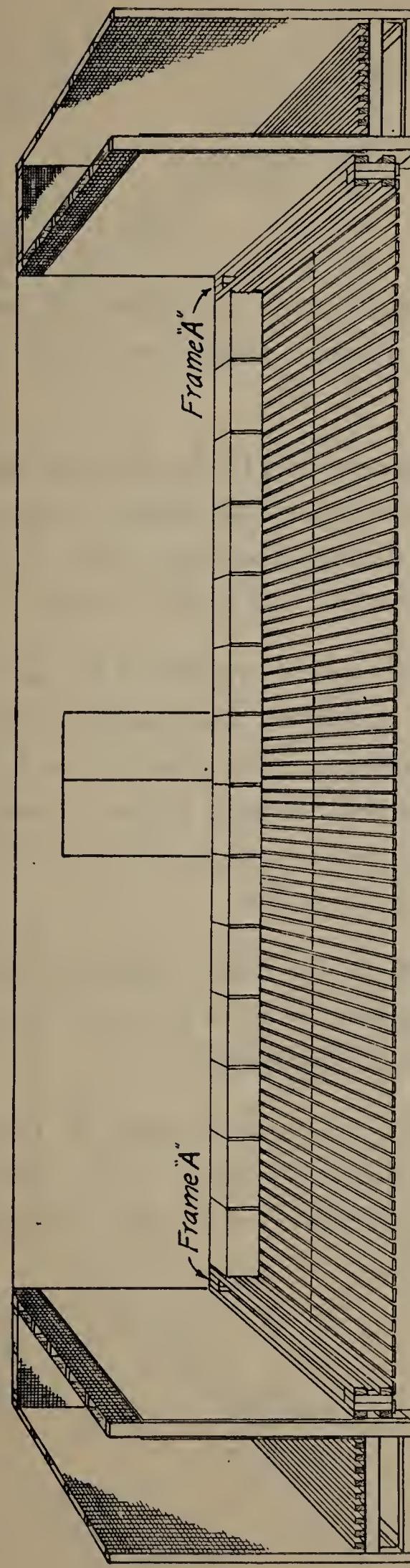


Fig. 1

Place a single row of cases the entire length of the car. Is there any space left? If so, divide it equally between the two ends, and make the open wooden box frames, as shown in figure 2, to fit the spaces.

### EGG LOAD FRAME

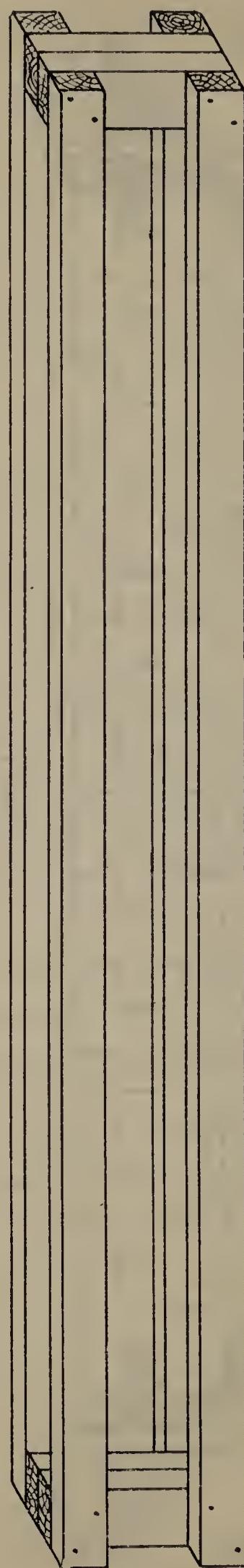


Fig. 2

Frame A: Open wooden box frame made of scantling. Place it close against the bulkhead. Nail old case lids on top to prevent straw from falling through.

## EGG LOAD BRACES



Fig. 3

Here is the brace (B) to put under the holding cases when the layer is incomplete. Use scantling and old case lids.

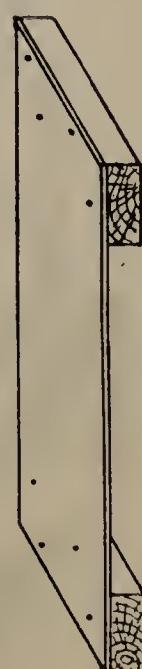


Fig. 4

When the load is step-joint, this little brace (C), about eleven inches wide, is used under alternate cases.

WHEN THE CAR DOES NOT HAVE A RACK FOUR INCHES ABOVE THE FLOOR

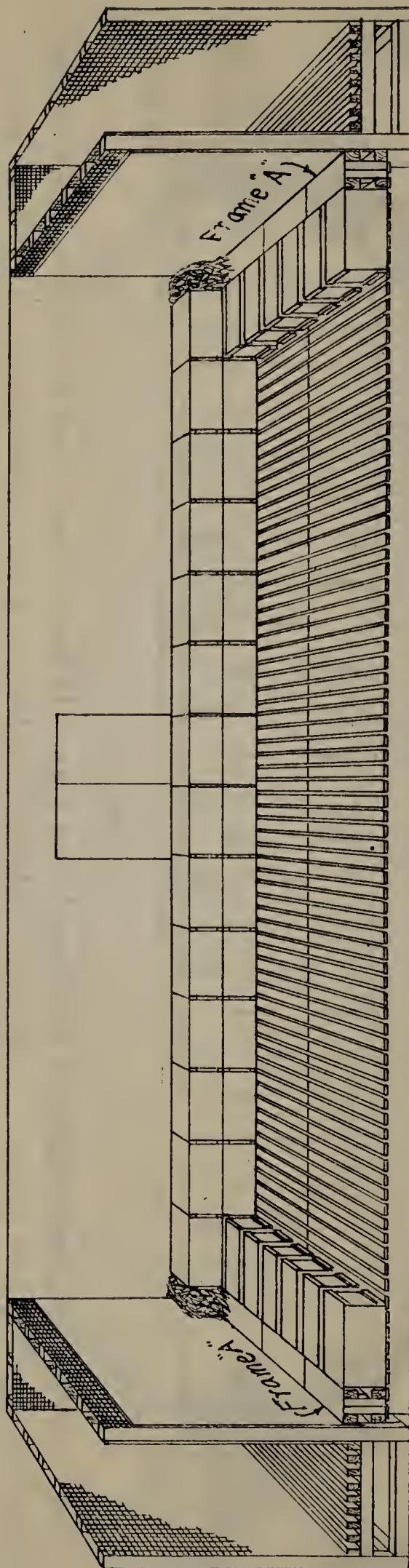


Fig. 5

Load first layer seven cases wide. Space the cases evenly across the car against the open box frame, leaving unbroken air channels from end to end. Begin the second layer on top of the first and against the car wall.

PACK STRAW TIGHTLY

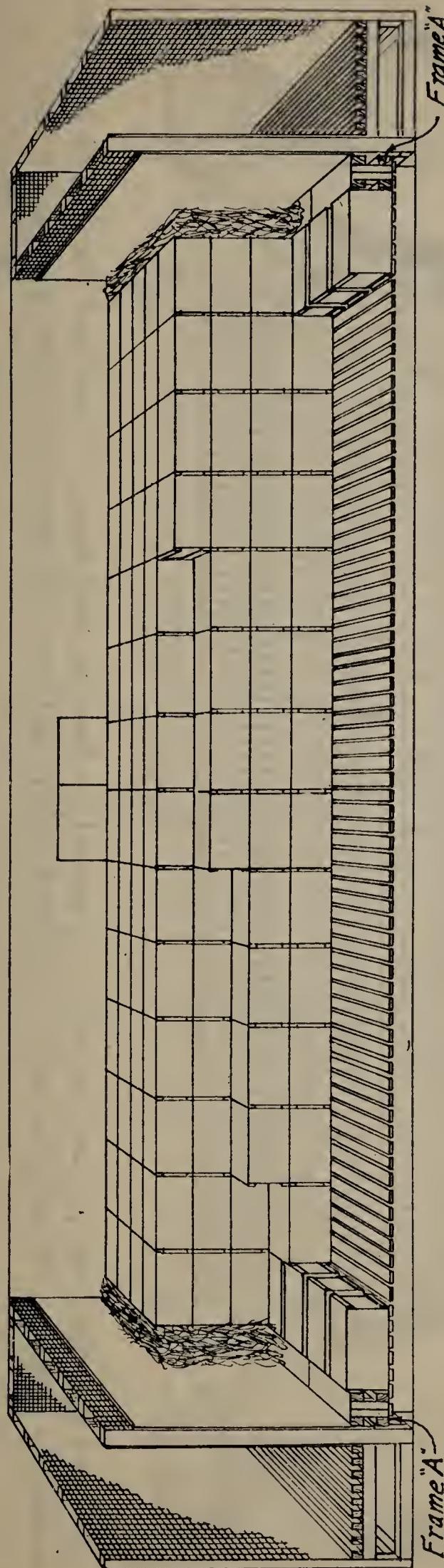


Fig. 6

All the layers of cases except the first are eight cases wide, and all are placed from the side. Pack the straw as tightly as man power can pack it. Fill the space with straw as the loading progresses.

**DON'T WALK ON CASES—THAT BREAKS EGGS**

NO COUNTERWISE CASES IN THIS LOAD

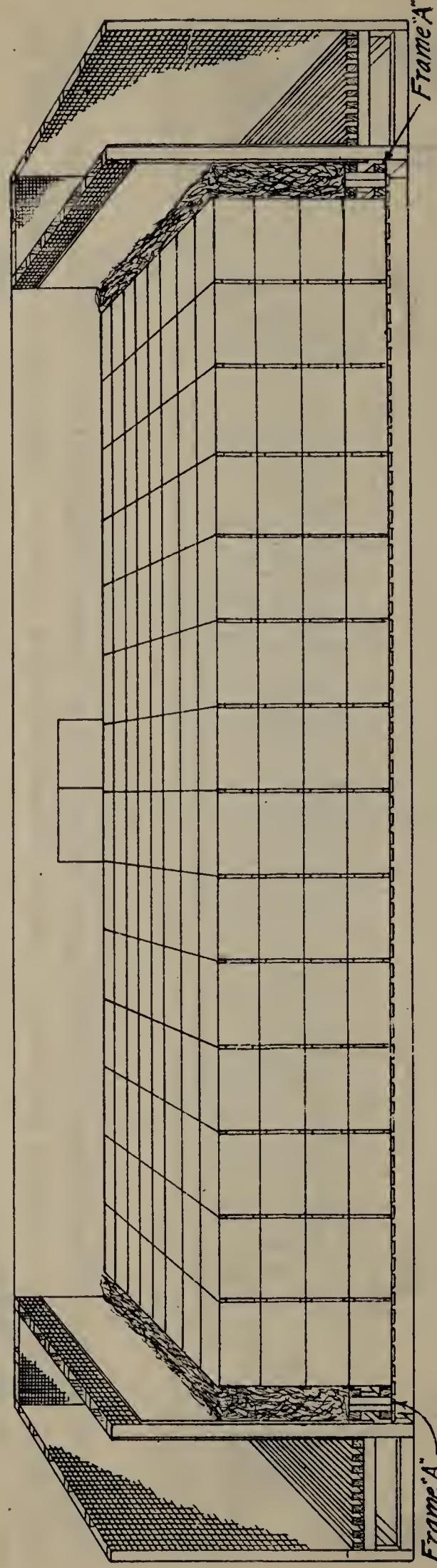


Fig. 7

Here is a four-layer-high straight-joint load completed. It fits tightly in the car. If the top layer of your car is not complete look at figure 8.

THE OPEN BOX FRAME AND THE AIR CHANNELS ASSIST REFRIGERATION

## WOOD FRAME INSTEAD OF STRAW BUFFING

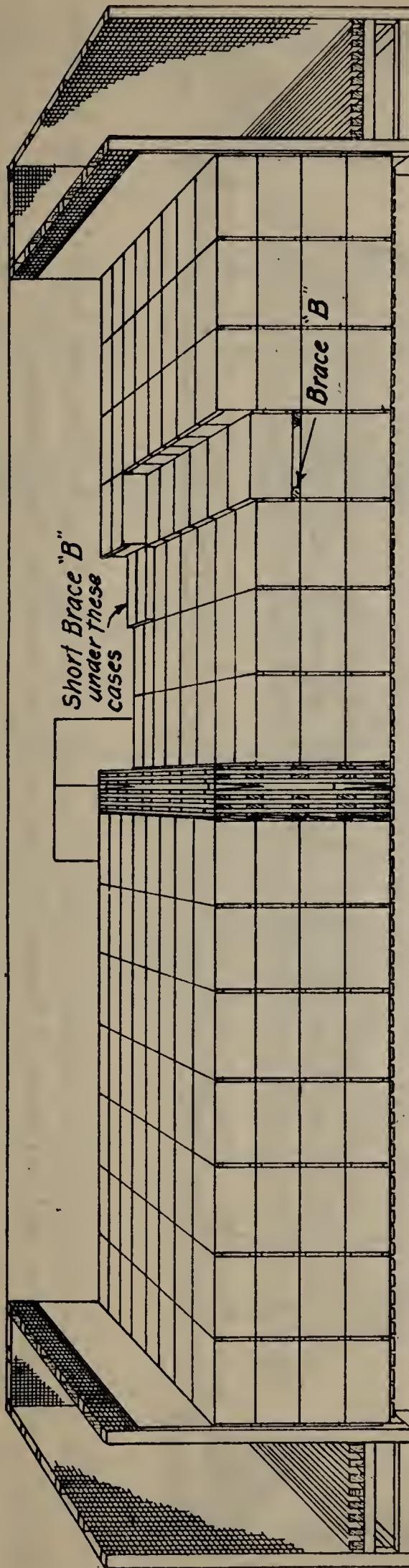


Fig. 8

You can use wood buffing with the straight-joint load. Make a frame to take up the slack at the doorway, as shown in this picture.

The top layer is incomplete. Brace it by using an "under case brace" under the third layer of cases in front of the last complete stack.

## MIXED EGG AND POULTRY CARS

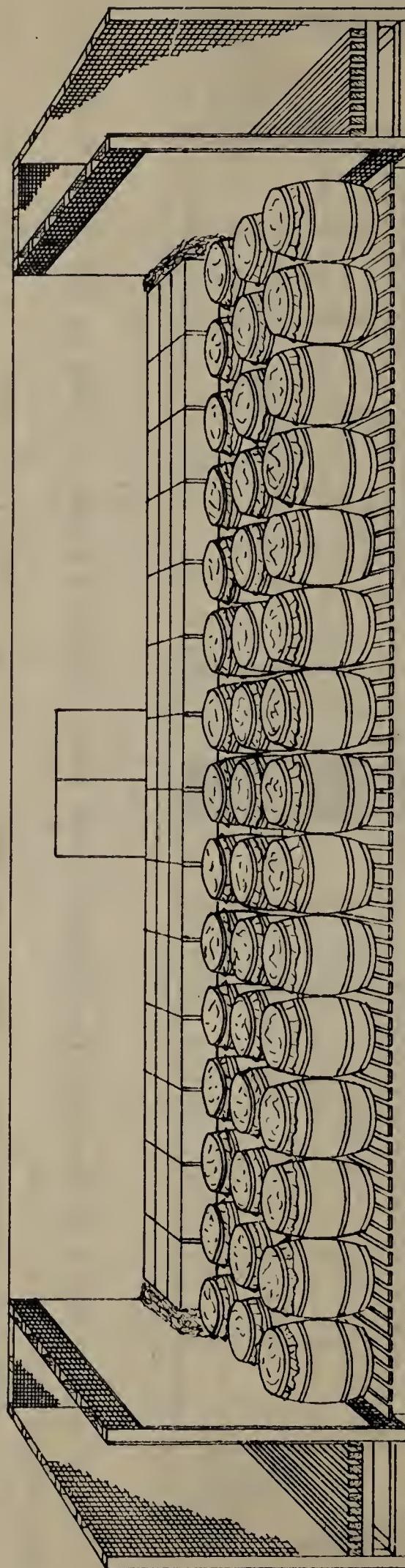


Fig. 9

Have you cases of eggs and barrels of poultry to load in the same car? You can load the eggs from the side, and take up the slack with wood frames at the center or straw at the bunkers.

**DON'T FORGET THE OPEN BOX FRAME IF YOU USE STRAW BUFFING**

## THE STEP-JOINT AND STRAIGHT-JOINT LOAD CARRY EQUALLY WELL

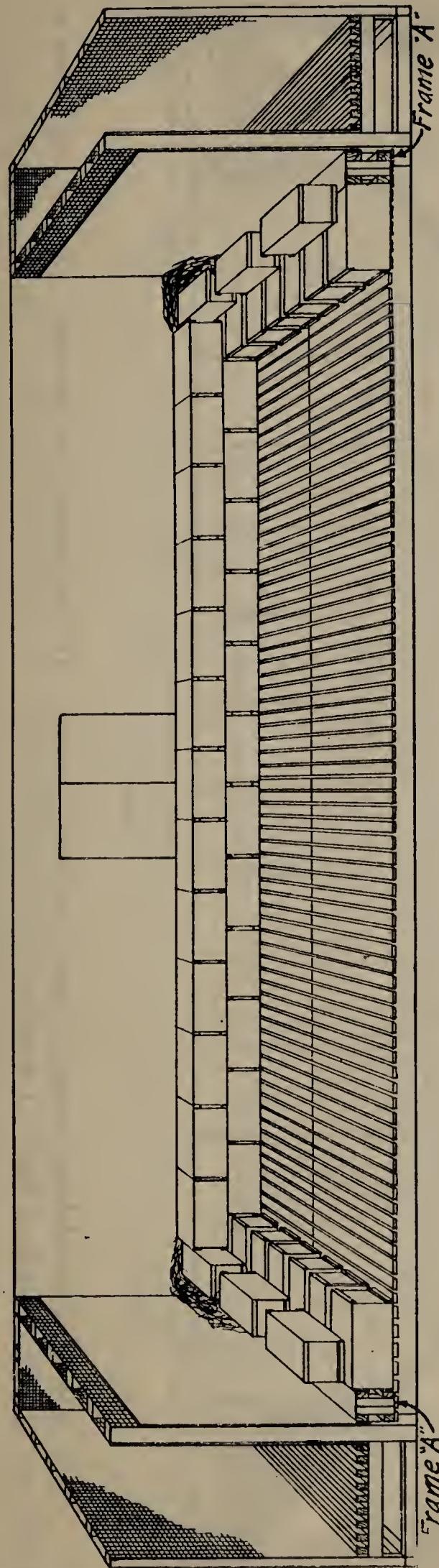


Fig. 10

If you would prefer to step-joint the cases, place them as shown in this picture. Be sure the three crosswise cases in the second layer are evenly spaced. Pack the straw between them and in the space above the box frame very tightly.  
**THE LOAD MUST BE TIGHT**

THERE IS NO CONFUSION AT THE MIDDLE OF THE LOAD

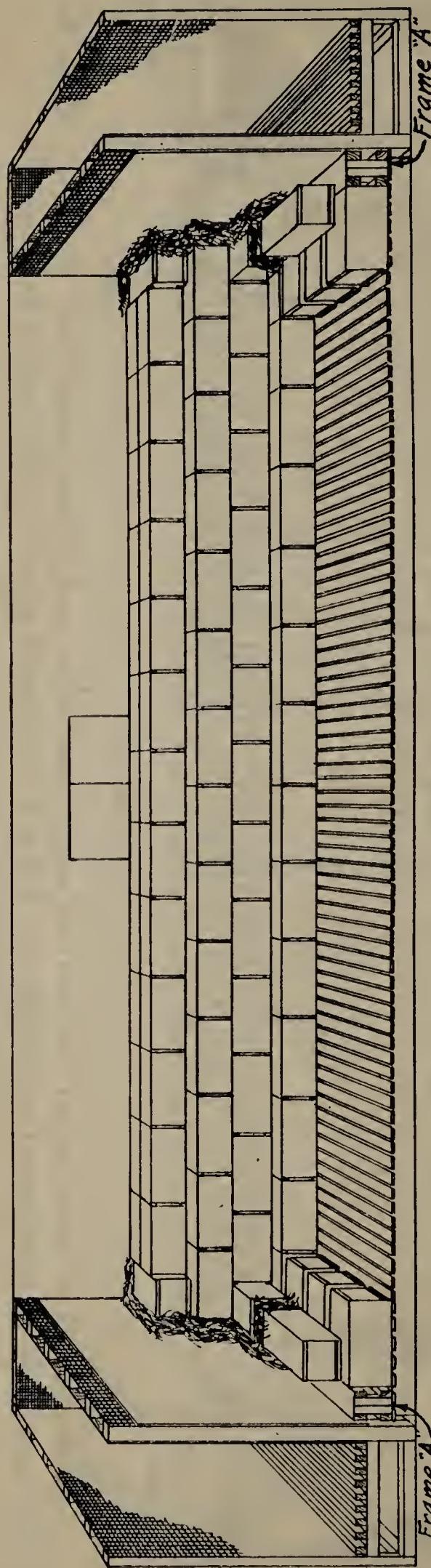


Fig. 11

Load the third layer from the side. It should be like the first layer. Then load the fourth layer to match the second. Be sure the straw is packed tightly between the cases and in the bunker space.

SIDE LOADING MAKES A SOLID MASS OF CASES AT THE DOORWAY

THE LOAD IS A SOLID UNIT

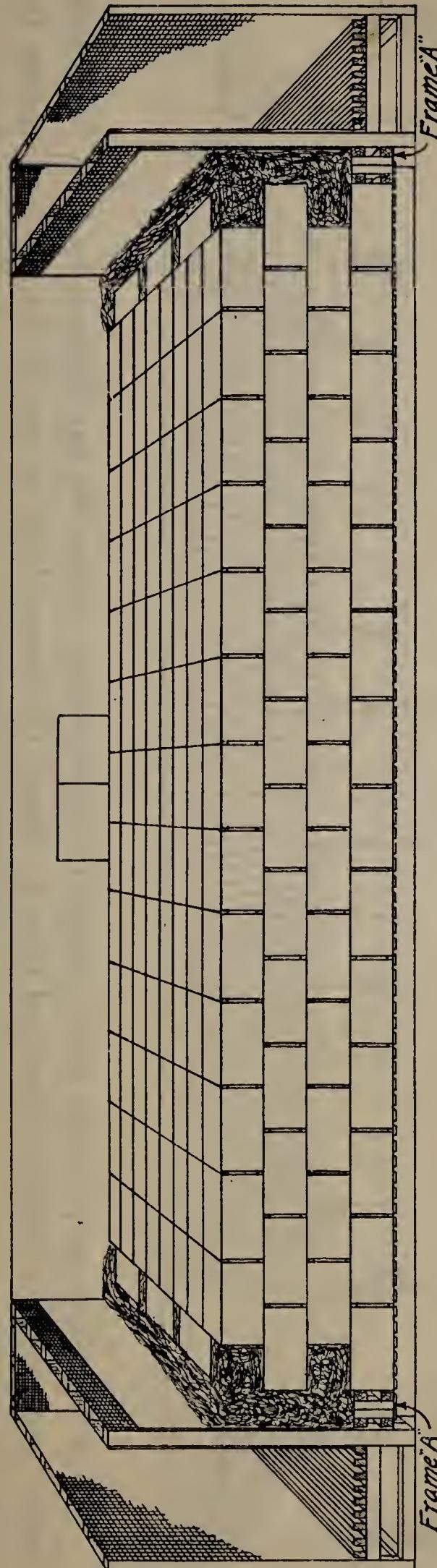


Fig. 12

Here is the completed step-joint load four layers high. If the car has a rack four inches above the floor, all layers are eight cases across. If the floor is stripped or bare, put seven cases across in the first layer.

BE SURE THE STRAW IS RAMMED TIGHT IN EVERY SPACE

## COMBINATION STEP- AND STRAIGHT-JOINT LOAD

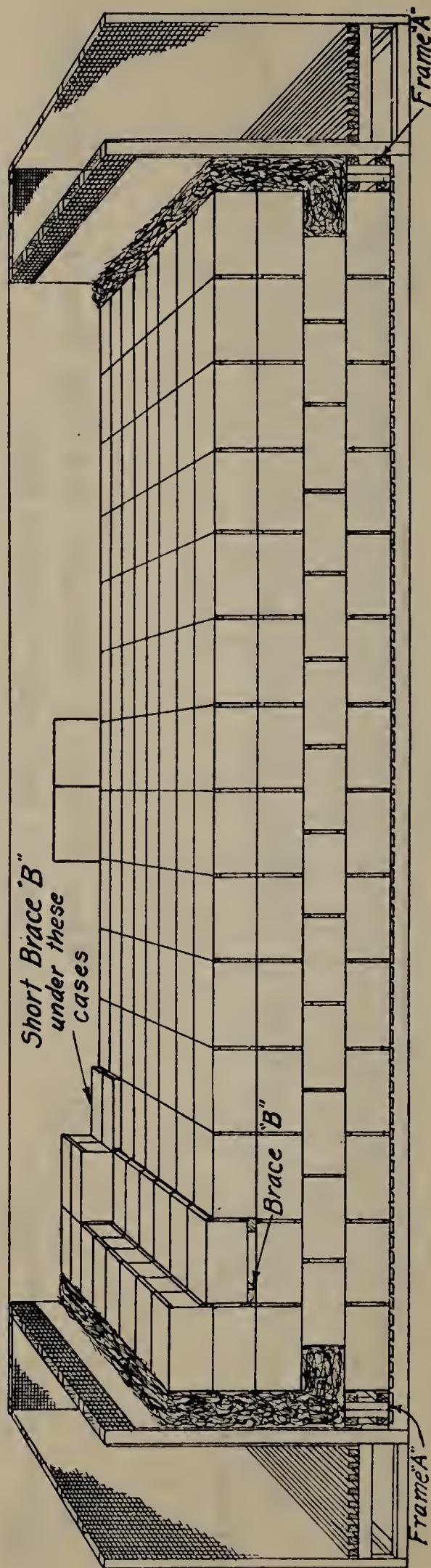


Fig. 13

If the top layer is incomplete, you can make its bracing easier by placing the two top layers with straight joints. The uneven stacks are firmly held by the lateral braces under the third layer of the second stack of cases.

DON'T NAIL BRACES TO THE CAR WALLS

INCOMPLETE TOP LAYER STEP-JOINT LOAD

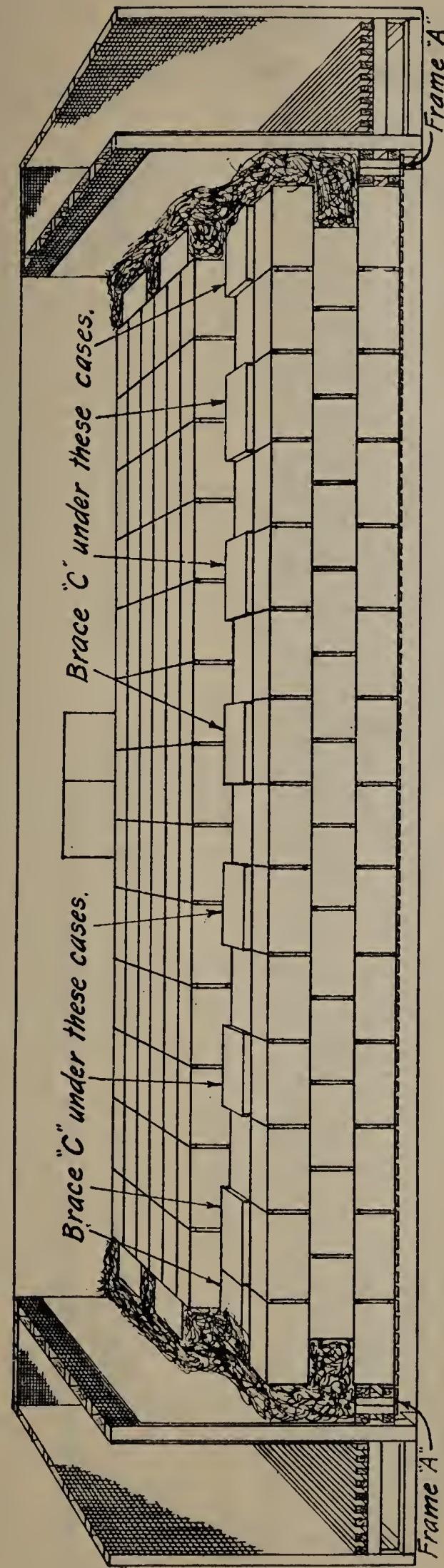


Fig. 14

Load from the side. The fourth layer is incomplete. It has only six rows. Hold it by raising every other case in the seventh row, third layer, by means of the little case lid brace shown in figure 2.

THE LOAD IS SOLID AT THE DOORWAY

**D**ON'T waste time and labor by using cheap cases; time and labor are precious.

Don't save pennies by buying poor fillers and flats when you lose dollars in broken eggs. The saving of one egg would pay for the extra cost of a set of No. 1 fillers.

Don't nail braces to sides of car against incomplete top layer; they seldom hold in place and often are the cause of damage. They injure the efficiency of the car insulation. The use of small under case braces will prevent all of this.

Don't waste ice and refrigeration by stowing the load so as to make air circulation in the car impossible.

Don't tie up your money in freight claims because of a loose load. Tie up the load and leave the money loose to work again.

*Reserve*  
*Re*  
*C*

POINTS FOR POULTRY PACKERS

*No. 2*

# WHEATLESS RATIONS

TO

Flesh Young Chickens

IN

Your Feeding Station

One dozen money-saving, flesh-producing,  
wheatless rations for young chickens.

Good anytime. Just now  
patriotic, too.



U. S. DEPT. OF AGRICULTURE,  
BUREAU OF CHEMISTRY,  
WASHINGTON, D. C.

YOU do not need wheat in the chicken fleshing ration. You can even do without corn.

Many kinds of grain finely ground—some of them available in your vicinity—when combined with buttermilk make admirable fleshing rations.

The twelve wheatless rations—some cornless as well—given in this folder, have all been proved commercially. All are good. Study them and pick out those best suited to your nearby supplies. Consider especially the by-products, such as yeast from the breweries and peanut meal from the cottonseed mills.

These rations will give gains of from 25 to 40 per cent of the initial live weight in fourteen days of feeding, provided the birds are young, vigorous, and rather thin. They are suited to both broilers and roasters.

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Do not expect any ration to give good gains in weight if—

- (1) The coops are infested with vermin.
- (2) There is a lack of fresh air.
- (3) Too many birds in the battery.
- (4) Too much confusion and noise in the feeding station.

You supply the feed, but the chickens must do the work. It can be well done only under good conditions.

Young birds of the American breeds will make the quickest and largest gains.

These rations are for battery fleshing in packing house feeding stations only—not on farms. The birds so fleshed cannot be shipped alive without a heavy loss in weight.

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## RATION 1.—CORN MEAL.

This ration has been in general use for a long time. It may be taken as the standard of comparison.

Corn meal.....40.0 per cent

Buttermilk .....60.0 per cent

Efficiency .....1.00

Feeding time.....14 days

Average initial live weight.....1.75 pounds

Pounds of grain per pound of gain live  
weight .....3.39

Pounds of ration required per pound of  
gain in live weight.....8.48

## RATION 2.—CORN GERM MEAL.

Corn germ meal is a by-product of the corn-starch factories. It is an excellent feedstuff when mixed with buttermilk.

Corn meal.....15.0 per cent

Buttermilk .....75.0 per cent

Corn germ meal.....10.0 per cent

Efficiency of this ration.....1.62

Efficiency of corn meal and buttermilk....1.00

Feeding time.....14 days

Average initial live weight.....1.8 pounds

Pounds of grain per pound of gain live  
weight .....2.18

Pounds of ration required per pound of  
gain in live weight.....8.72

### RATION 3.—DISTILLERS' GRAINS.

If there is a distillery near by, try to buy their grains—wet or dry.

Corn meal .....	30.0 per cent
Buttermilk .....	60.0 per cent
Distillers' grains .....	10.0 per cent

Efficiency of this ration.....	1.08
Efficiency of corn meal and buttermilk....	1.00
Feeding time.....	14 days
Average initial live weight.....	1.7 pounds
Pounds of grain per pound of gain live weight .....	3.11
Pounds of ration required per pound of gain in live weight.....	7.77

### RATION 4.—YEAST.

Breweries and commercial alcohol factories waste tons of yeast. You can use it wet or dry.

Corn meal .....	36.0 per cent
Buttermilk .....	60.0 per cent
Dried yeast.....	4.0 per cent

Efficiency of this ration.....	1.08
Efficiency of corn meal and buttermilk....	1.00
Feeding time.....	14 days
Average initial live weight.....	1.9 pounds
Pounds of grain per pound of gain live weight .....	3.24
Pounds of ration required per pound of gain in live weight.....	8.09

## RATION 5.—GROUND OATS.

The ground whole oat grain decreases the amount of feed required for a pound of gain, when replacing one-quarter of the corn used in the usual corn and buttermilk ration.

Corn meal .....	30.0 per cent
Buttermilk .....	60.0 per cent
Ground oats .....	10.0 per cent
Efficiency of this ration.....	1.38
Efficiency of corn meal and buttermilk....	1.00
Feeding time.....	14 days
Average initial live weight.....	2.4 pounds
Pounds of grain per pound of gain live weight .....	3.05
Pounds of ration required per pound of gain in live weight.....	7.63

## RATION 6.—GROUND OATS.

Too much oats must not be used. Half and half is about the limit.

Corn meal .....	20.0 per cent
Buttermilk .....	60.0 per cent
Ground oats .....	20.0 per cent
Efficiency of this ration.....	1.12
Efficiency of corn meal and buttermilk....	1.00
Feeding time.....	14 days
Average initial live weight.....	3.4 pounds
Pounds of grain per pound of gain live weight .....	3.04
Pounds of ration required per pound of gain in live weight.....	7.61



## RATION 7.—KAFIR MEAL.

Does your country raise kafir more easily than corn? If so, try this ration.

Kafir meal .....	44.4 per cent
Buttermilk .....	55.6 per cent
Efficiency of this ration.....	0.96
Efficiency of corn meal and buttermilk....	1.00
Feeding time.....	14 days
Average initial live weight.....	4.7 pounds
Pounds of grain per pound of gain live weight .....	3.69
Pounds of ration required per pound of gain in live weight.....	8.32

## RATION 8.—BARLEY-KAFIR.

The Pacific coast raises barley and kafir. Mix some barley with the kafir and buttermilk, and increase the rate of gain.

Kafir meal .....	20.0 per cent
Buttermilk .....	60.0 per cent
Ground barley.....	20.0 per cent
Efficiency of this ration.....	1.15
Efficiency of corn meal and buttermilk....	1.00
Feeding time.....	14 days
Average initial live weight.....	4.6 pounds
Pounds of grain per pound of gain live weight .....	3.61
Pounds of ration required per pound of gain in live weight.....	9.02

## RATION 9.—GROUND BARLEY-CORN.

Sometimes barley can be obtained as easily as corn. It can be used to advantage. It increases the rate of gain and decreases the amount of feed required per pound of gain.

Corn meal . . . . .	30.0 per cent
Buttermilk . . . . .	60.0 per cent
Ground barley . . . . .	10.0 per cent
Efficiency of this ration . . . . .	1.11
Efficiency of corn meal and buttermilk . . .	1.00
Feeding time . . . . .	14 days
Average initial live weight . . . . .	4.1 pounds
Pounds of grain per pound of gain live weight . . . . .	3.05
Pounds of ration required per pound of gain in live weight . . . . .	7.63

## RATION 10.—RICE MEAL.

The rice mills can provide you with rice meal, a by-product in the milling of rice.

Corn meal . . . . .	34.0 per cent
Buttermilk . . . . .	60.0 per cent
Rice meal . . . . .	6.0 per cent
Efficiency of this ration . . . . .	1.21
Efficiency of corn meal and buttermilk . . .	1.00
Feeding time . . . . .	14 days
Average initial live weight . . . . .	2.75 pounds
Pounds of grain per pound of gain live weight . . . . .	3.06
Pounds of ration required per pound of gain in live weight . . . . .	7.65

## RATION 11.—PEANUT MEAL.

Peanut press cake is a new feedstuff in the South. It is becoming more available with the development of the peanut oil industry. Many cottonseed mills are producing it.

Corn meal . . . . .	34.0 per cent
Buttermilk . . . . .	60.0 per cent
Peanut press cake meal	6.0 per cent
Efficiency of this ration.....	1.28
Efficiency of corn meal and buttermilk...	1.00
Feeding time.....	14 days
Average initial live weight.....	3.4 pounds
Pounds of grain per pound of gain live weight .....	2.72
Pounds of ration required per pound of gain in live weight.....	6.81

## RATION 12.—EGG ("Rots" and "Spots").

Don't throw away the white rots and spot eggs. Boil them hard, grind them, shells and all, and feed. Be careful not to use more egg than this ration indicates.

Corn meal . . . . .	34.0 per cent
Buttermilk . . . . .	47.8 per cent
Boiled egg . . . . .	18.2 per cent
Efficiency of this ration.....	1.54
Efficiency of corn meal and buttermilk...	1.00
Feeding time.....	14 days
Average initial live weight.....	1.8 pounds
Pounds of grain per pound of gain live weight....	2.26 plus 1.21 pounds boiled egg
Pounds of ration required per pound of gain in live weight.....	6.65

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Ration 1, consisting of corn meal and buttermilk, is used as a convenient standard of comparison. The figures of efficiency mean that if chickens under given conditions gain a pound of live weight on Ration 1, they may be expected to gain 1.62 pounds on Ration 2, and only 0.96 pounds on Ration 7. By regarding the efficiency figures as representing pounds of live weight, the flesher can easily work out the ration most economical for his locality.

In determining the monetary economy of a ration, the amount actually fed to produce a pound of gain must be taken into consideration. For example, 8.48 pounds of Ration 1 are required to produce a pound of live chicken, while only 6.81 pounds of Ration 11 are needed. Quantity used, as well as first cost of feed, must be taken into consideration in determining which ration is the cheapest in the long run.

With grain so needed for human food, patriotism demands especial consideration of this item.

U. S. DEPARTMENT OF AGRICULTURE.

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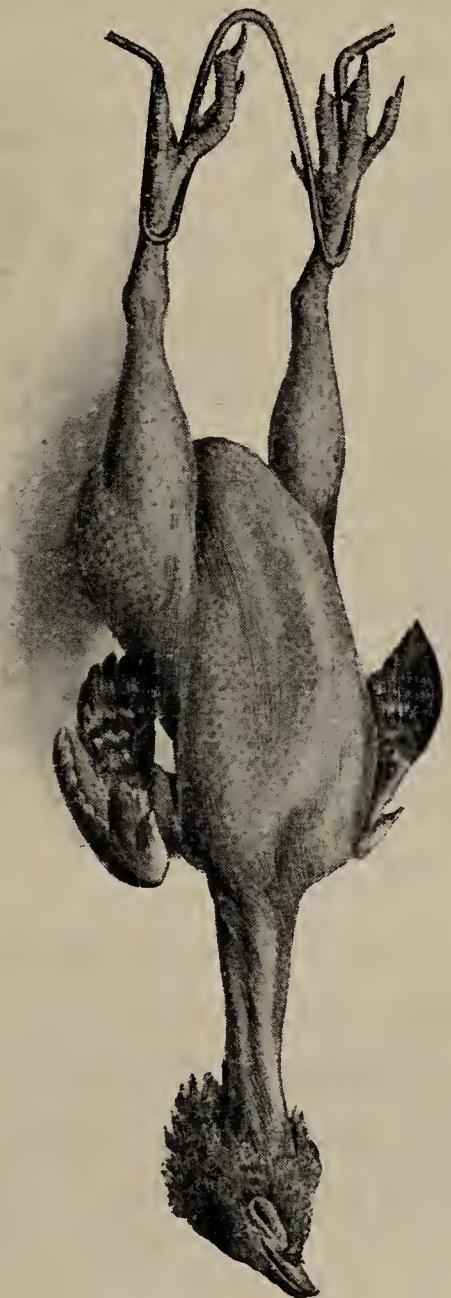
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**POINTS FOR POULTRY PACKERS**

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No. 3

# HOW TO PICK CHICKENS



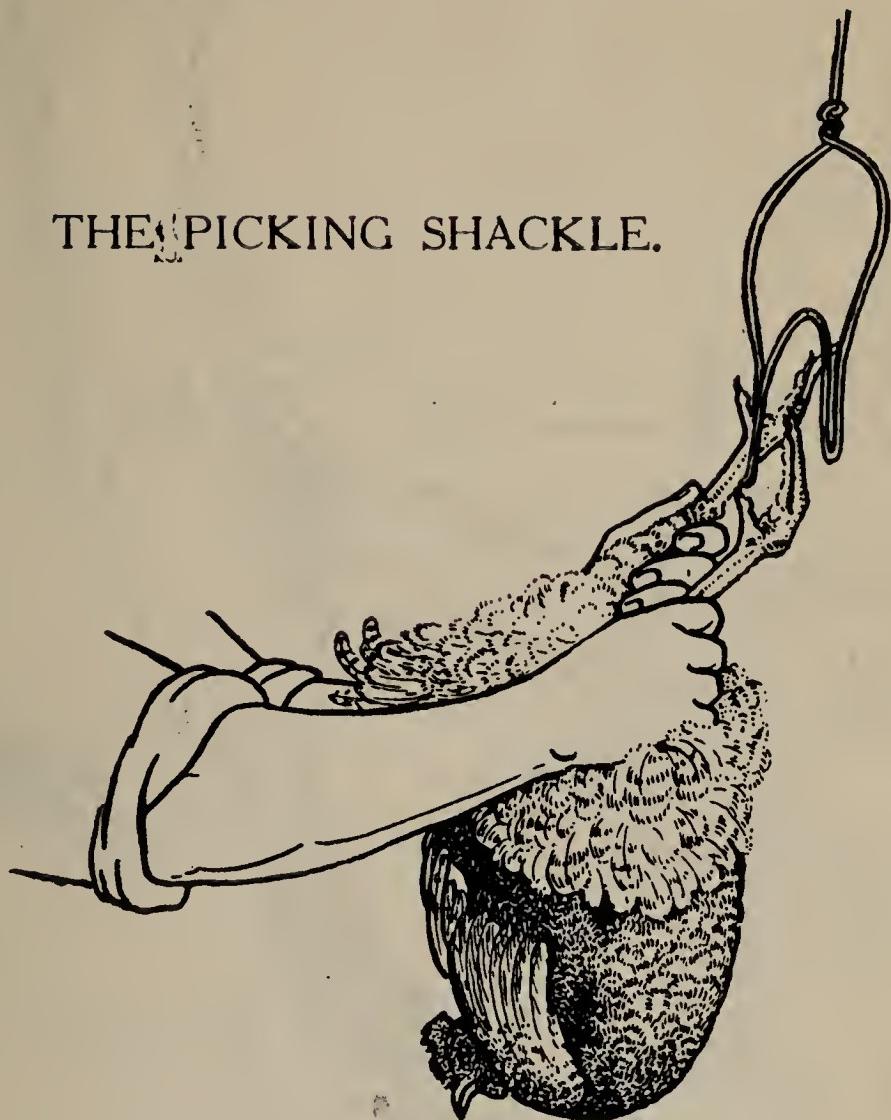
**U. S. DEPT. OF AGRICULTURE  
BUREAU OF CHEMISTRY  
WASHINGTON, D. C.**

**B**ADLY picked chickens cause a money loss—2 to 6 cents a pound. Torn skins, “burnt” wings and legs—due to continued and rough “stripping”—pin feathers that show, discolored necks because the neck feathers were pulled first instead of last—these things bring about a reduction of from 2 to 6 cents a pound on the market. Why not turn out a perfectly dressed bird, like the one shown on the cover of this folder?

Much of the loss results from “roughing,” when the quills and most of the soft feathers are removed. This folder tells how to “rough” properly. The few feathers, pins, and down remaining should be removed by the “tipper,” or “pinner,” as they say in the East.

Proper braining is an essential to easy dry picking—it makes dry picking as easy as “scalding.” Follow U. S. Department of Agriculture’s explicit directions for bleeding and braining.

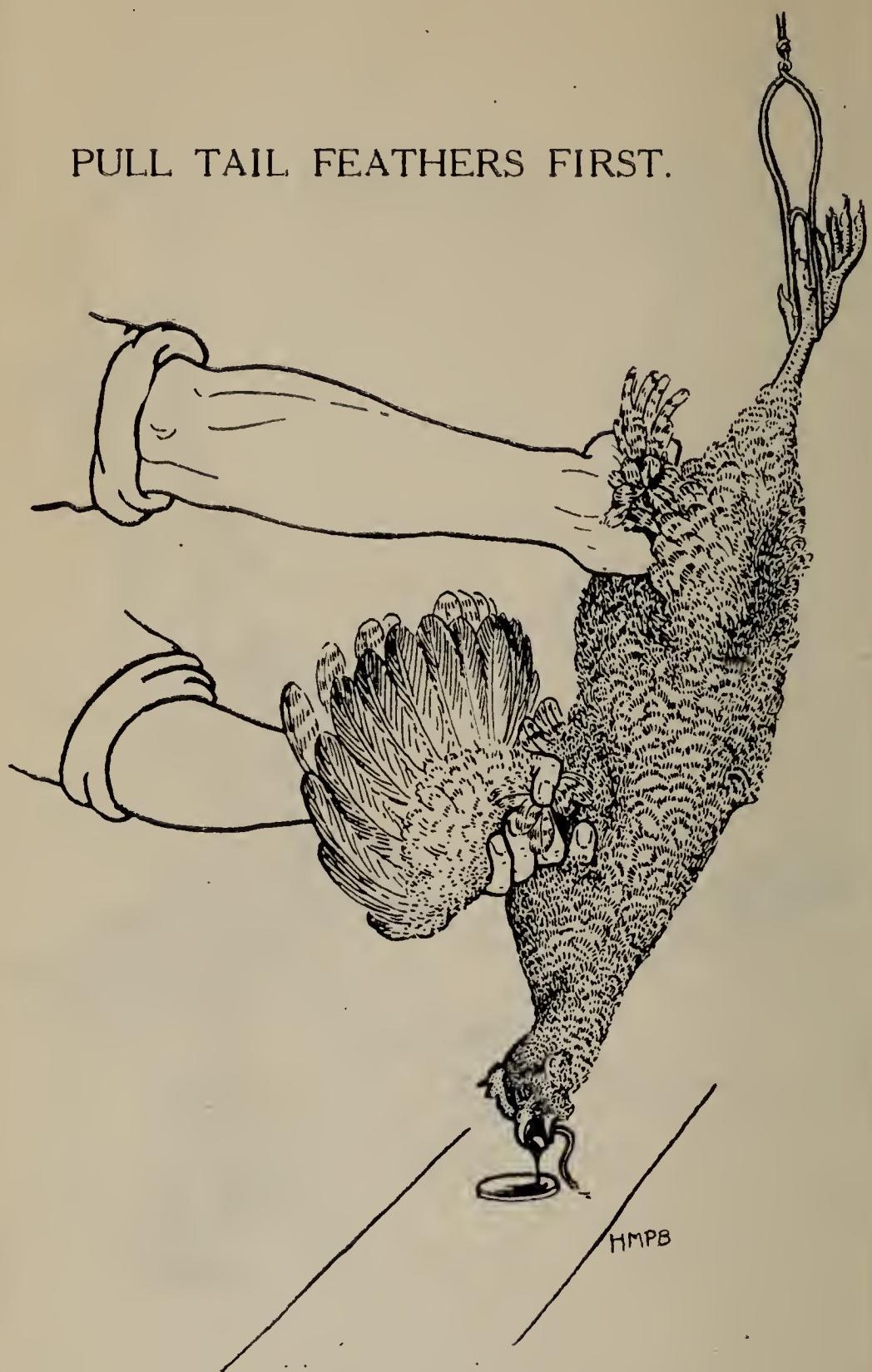
## THE PICKING SHACKLE.



HMPB

This shackle, made of galvanized wire  $\frac{1}{8}$  inch in diameter, is suspended by a cord. With the feet in the shackle the wings of the bird should be level with your elbows.

PULL TAIL FEATHERS FIRST.



As soon as the throat vein is cut and the brain punctured, grasp the wings in the left hand, being sure not to clasp the neck.

Grasp the tail with the right hand—thumb down—then turn the wrist and twist out the feathers as the fist turns upward.

HEAVY WING FEATHERS NEXT.



Pull the large wing feathers next.  
Hold the hand with the thumb upward.  
Grasp as many feathers as you can in  
one hand. Jerk them out with a sharp,  
quick downward movement. One grab  
for small birds—two for large.

## PLUCKING BREAST AND SIDES.



Now for the breast and sides. Begin at the wishbone. Take large handfuls. Seize the feathers with the whole fist, thumb upward. Pull up and out, twisting the forearm outward.

## PREVENTING TORN SKINS.



Work up to the thighs, taking large fistfuls of feathers and being sure to pull upward and twist the forearm outward. It's the twist that turns the trick and prevents torn skins. Do one side first, then the other.

## STRIPPING THE LEGS.



The legs come next. Clasp the leg firmly at its base. Keep the thumb upward. Move the closed hand along the leg, pressing hard enough to strip the feathers. Be sure to work in the direction of the feather setting, and strip only once! Feathers left must be pulled.



## THE SOFT BODY FEATHERS.



As the shackle holds the legs apart, it's easy to slip the hand between them to pull the soft body feathers. Pull up, and toward the body of the picker.

## BACK AND HIP FEATHERS.



The trick in removing the back and hip feathers is to grasp the feathers with the palm of the hand outward, and then rotate the forearm inward. This makes a sort of scraping motion, and out come the feathers. Study the picture.

## SCRAPING THE BACK.



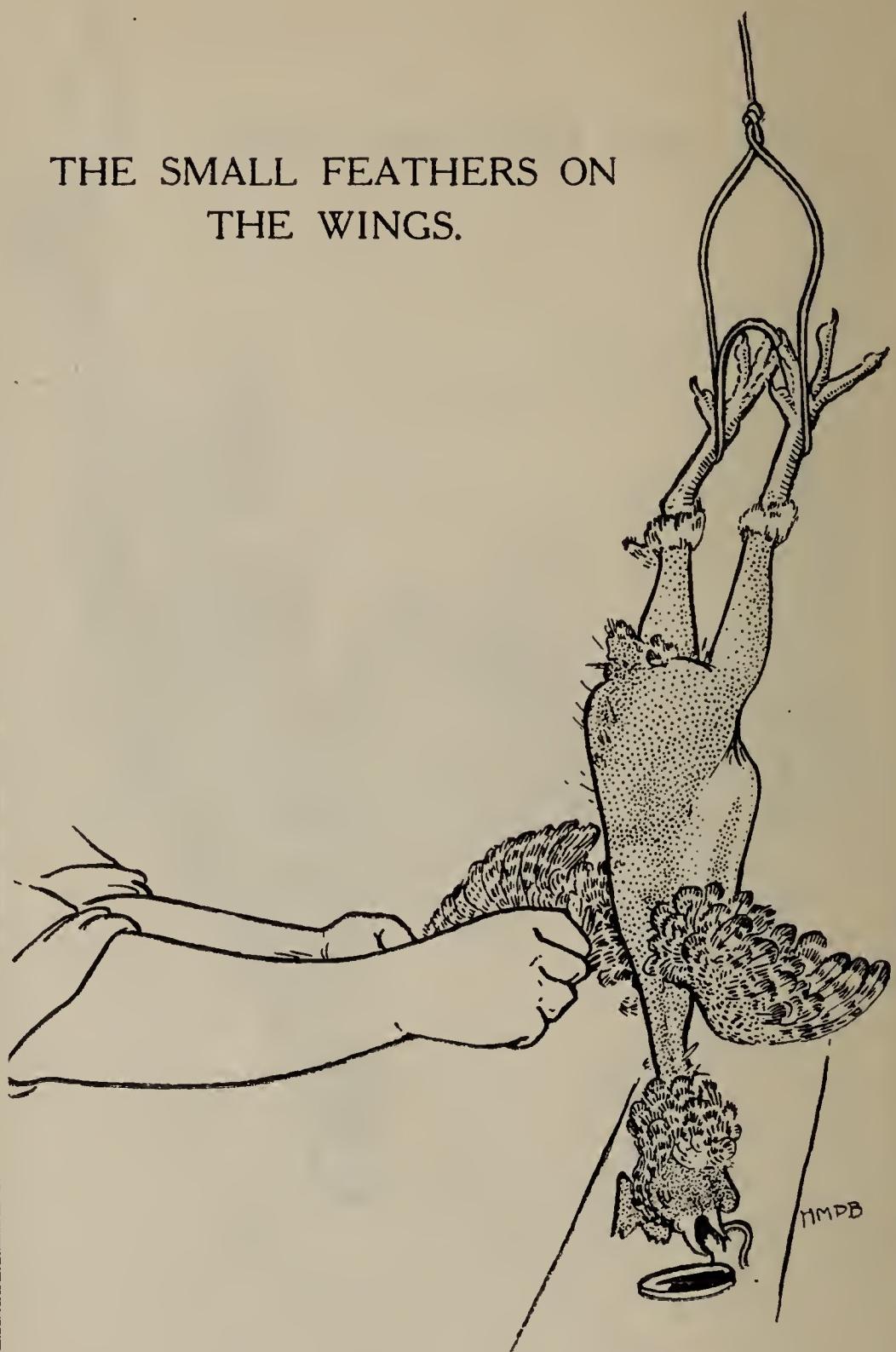
Here is the hand in the act of scraping. Do you see the way the forearm is turned inward? Pull out the little feathers between the shoulders with thumb and forefinger.

NOW FOR THE NECK.



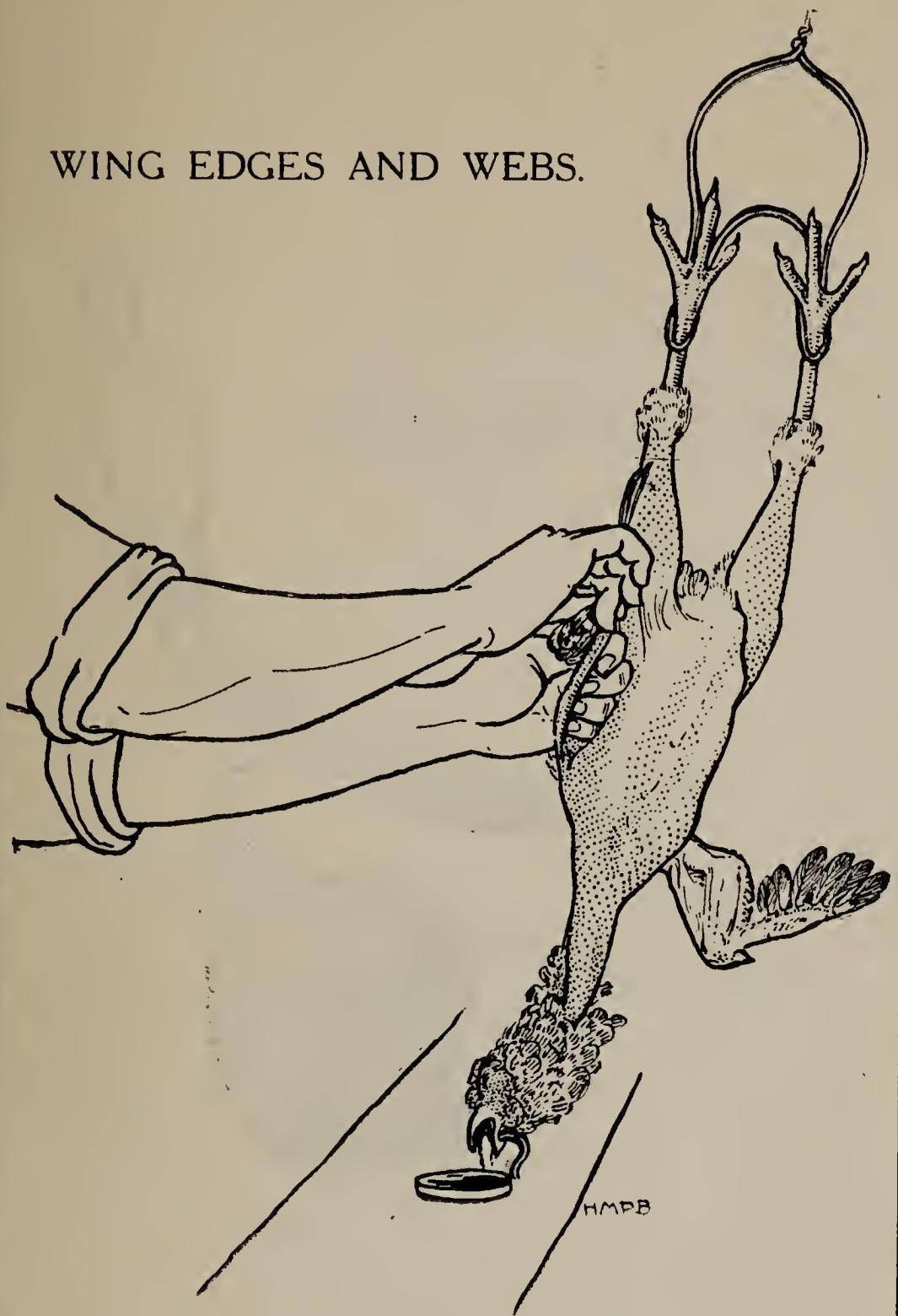
This is the time to strip the neck. Clasp the neck, thumb upward, around the base. Strip by sweeping downward. Sometimes two sweeps are needed—one on the upper, the other on the lower half of the neck. Any feathers left must be picked out.

THE SMALL FEATHERS ON  
THE WINGS.



Great care must be taken with the small wing feathers, especially near the body. Stretch the wing as shown. Pick the medium-sized, soft feathers on the broad surfaces in small bunches with thumb and forefinger. If the bunches are too large the skin will be torn.

## WING EDGES AND WEBS.



Hold the wing in a vertical position with the thumb and forefinger pinching the second joint from the body. With thumb and forefinger moving downward against the feather setting remove the small feathers on edges and web. The stiff feathers and fans are pulled one at a time by bending sharply downward and jerking quickly.

